No. XVI.

Notice of a New Crystalline Form of the Yenite of Rhode Island. By Dr. G. Troost.—Read, 15th October, 1824.

I PUBLISHED in the Journal of the Academy of Natural Sciences of this city the discovery of the Yenite, found for the first time on this side of the Atlantic. The specimens of that mineral which fell under my examination presented only the *quadriduodecimal* and some crystals approaching to the *trioctonal* and *monostique* of Hauy. Dr. Mease, one of our members, lately presented through me a specimen of the same mineral to the cabinet of our Society, which contained some crystals deviating considerably from the forms mentioned; but they were so small as to prevent me from ascertaining the value of the angles, and I was therefore not able to determine their true form. Having since received some specimens through the politeness of Dr. Samuel Robinson of Providence, R. I., I found them of the same form, and of a size sufficiently large to enable me to measure the inclination and to determine the form. The crystal in question is a straight rhomboidal prism, the angles being 83° 58′ and 96° 2′, and the sides forming with the base an angle of 90°. I call it

PRISMATIC YENITE. (*Fer calcaréo-siliceux prismatique.*)

If we adopt the primitive form obtained by mechanical division by Hauy, which is a rectangular octaedron, we shall have for representative signs $_4\mathrm{F}\,{}_4\mathrm{B}$; and adopting the hypothetical nucleus of Cordier, which is a straight rhomboidal prism, its representative signs would be $_4\mathrm{G}\,{}_4\mathrm{P}$.

The specimen now in the collection of the Society is composed of a few of the above described crystals placed in an horizontal position, with crystals of greasy quartz, on granular quartz, containing some minute octaedrons of magnetic iron ore which make it act upon the magnetic needle.

I found some modifications of the same form on the specimens which I received from Dr. Robinson. Some of the prisms are joined side by side, so as to form an even plane which might be taken for an extensive tabular crystal; but when examined by a magnifying glass, we perceive the joints by which these different prisms are united. Some of these tables are terminated by a plane under an angle of 90°, and must therefore be composed of the prisms above described. Others are terminated by an angle of between 145° and 150° which I have not been able to ascertain owing to the position; so that it is probable that at this locality some other forms may be discovered.

The Yenite is generally of a black colour; as is the case with the European mineral. But that of Rhode Island offers also a greyish white, intermixed with yellow and passing from that through the various shades of rubiginous yellow and brown to perfect black. However these colours are rare. I have but one specimen in my collection, and it is the only one that I have seen.

It occurs likewise in the quartz already mentioned; and in limestone of a peach blossom red colour, probably coloured by manganese and some green fibrous substance which seems to be the acicular actinolite and limestone, which has

assumed a fibrous appearance,—and it is only by a magnifying glass that we discover that the fibres of the Yenite are formed by a combination of minute crystals of that mineral.

As to the geognostic situation of this mineral, nothing can with certainty be said. It is found on the farm of a Mr. Brown in Cumberland township, fifteen miles north of Providence, Rhode Island, where it occurs, according to Dr. Robinson, among heaps of stone which were blasted no one knows why,—possibly for the purpose of obtaining metal.